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Velpeau says: "When calculi are found lodged behind the meatus, or in the *fossa navicularis*, it rarely happens that the efforts of the bladder and the volume of the urine will not be found sufficient to expel them." But when these means do not succeed, he adds, "we should proceed to search for them by the dressing forceps, the point of which is somewhat concaved and flattened; or, as Sebatier recommends, by gliding underneath them a noose of iron or brass wire by means of a small scoop shaped like a hook; or, finally, if these should fail, or be attended with too many difficulties, by incising the lower wall of the urethra in front of the stone."

Before we proceed to comment upon the above manual or mechanical means of extracting a calculus from the urethra, it will be proper to notice the *sheathed forceps*, an instrument somewhat of the character of that used for holding the stone in the process of drilling, and thus breaking it up, as practiced many years ago by Civeale. A similar instrument has been used for extracting bullets.

The instrument herewith exhibited will give some idea of its design, and how efficiently it may be employed for either purpose. I will remark, however, that I never used it successfully in extracting a ball, but on one occasion I employed it with complete success in extracting a calculus from the forepart of the urethra of an adult.

We think the dressing forceps can hardly be made available if the calculus is lodged more than an inch back of the fossa navicularis, for the simple reason that the orifice and anterior part of the urethra would prevent the blades from being sufficiently opened to permit grasping the stone.

Those of us who have practiced noosing a bottle cork, when lodged in the bottle, with a piece of twine or wire, and have observed the manner in which the noose acts on the cork, to turn it diagonally, or more or less crosswise in the neck of the bottle; and especially, when we consider the lax condition of the lining

membrane of the urethra, its folds, rugæ, &c., I think we may safely say, that the noosing plan would be tedious and uncertain, if not of doubtful utility.

And lastly, the scoop shaped like a hook could not be easily passed by a calculus which was sufficiently large to fill up the urethra, so as fairly to hook upon and to act efficiently on its posterior extremity.

When the calculus is lodged some distance back from the orifice of the urethra, and cannot be dislodged or extracted by any of the above means, authors recommend *urethrotomy*, or cutting through the urethra upon the stone, at its under side, and thus extract the foreign body. In this way there is not much difficulty in extracting the calculus; but the danger of a fistula, and the trouble of a long process of treatment, and the uncertainty of effecting a cure, should lead us to hesitate and to exhaust all other reasonable expediencies before resorting to the use of the knife.

It has fallen to my lot to have had the management of some ten or a dozen cases of urinary calculi in the urethra. I have also seen several cases of fistulous openings in the urethra, and in two instances failed to close them up, by any and all the varied means which I zealously and persistently brought to bear upon them.

The cases of lodgment of calculi in the urethra that have fallen under my observation have been mostly in small boys. I can now bring to mind a very interesting case of a small boy, about six years of age, who had been attended for some days, or nearly a week, by a country physician, for suppression of urine. Diuretics and warm fomentations had been employed freely, till the bowels, as the physician supposed, had become enormously distended. On making inquiry as to the history of the case, and on percussion, I said to the doctor, "The bladder of your patient is full of urine, and there is great danger of the urethra giving way," as the penis and urethra were much inflamed near the testes. As the urine had been passing away from the little patient almost guttatim, I presume the attending physician had supposed the bladder was emptying itself. I attempted to pass the catheter into the bladder, and after traversing the urethra about an inch and a half, it came in contact with an obstruction—what appeared to be some foreign body—in short, like a small calculus. The catheter was withdrawn, and by the aid of the fingers, the stone was soon worked forwards to the orifice of the urethra, when it became necessary to divide it in the direction of the frenum before

it could be extracted. After this trifling operation the stone was readily extracted, the catheter introduced, and nearly a quart of urine drawn off. I believe the urethra either ulcerated or sloughed at the seat of the deepest inflammation, which resulted in a fistula that ultimately healed up.

The recent case, which gave rise to the chief or most important idea of our paper, is the following:

Samuel Baird, aged 30, a shoemaker by trade, and a resident of Albany, N. Y., was admitted to the Albany City Hospital, January 22d, 1867. He was an industrious, sober man, and had usually enjoyed good health; though some years ago he was troubled with dyspepsia for a short time.

Three years ago he began to suffer from severe pains, commencing in the region of the right kidney, and passing down to the testicle of the same side, giving the sensation as if a hard rough body had descended through the ureter to the bladder. The pains were severe, and would last from two hours, to all day or night.

At times the urine was bloody; and often in micturating, something would seem to "shut off," to use his own language, and at once cause intense pain.

Before entering the hospital, the patient had been sounded by Dr. Becket of this city, and two or three times by myself. The grating sound or sensation was more distinct than a regular klick —the characteristic sourd of a large and hard stone, when the steele sound is brought against it suddenly and sharply. The symptoms, we must confess, were not quite as satisfactory as I could have wished, to enable me to decide on the propriety of lithotomy—and yet there seemed to be no other alternative.

The day before the appointment for the operation, the patient took an infusion of buchu freely, and at night a dose of purgative medicine, which operated freely the next morning. At 9 o'clock A. M. he felt some hard body pass from his bladder into the urethra, and to take lodgment in front of the testes. The patient said he had felt similar sensations during the latter part of the night, while in the water closet, at stool. On examining the urethra a calculus was distinctly felt situated in front of the scrotum, of considerably large size.

Complete anesthesia was effected by ether and chloroform, when the process of dislodging the foreign body was commenced, in the presence of most of the medical staff of the hospital, several

medical gentlemen of the Legislature, citizens, physicians and medical students, by urging it forwards with the fingers. In this way it was at once started, and brought within about an inch and a half of the orificium urethra, where it seemed to resist all further effort by such means alone. At this juncture, I seized a large sized steel sound, which lay near at hand, and passed it into the urethra down to the calculus, by which the passage was expanded, somewhat like that of the mouth of a bag, by the fingers, when an effort is being made to fill it with any bulky material. With the sound thus fixed in contact with the stone, the manipulating process, with the fingers, was again resumed, by which both stone and sound were extruded from the urethral orifice.

The calculus, as will appear from the examination of the specimen herewith exhibited, is of that class of urinary deposits called "mulberry calculus." The color and physical configuration, appear considerably like the fruit of the mulberry.

Dr. Mosher, the professor of chemistry in the Albany Medical College, applied two or three tests to determine its chemical composition, which resulted in his finding oxylate of lime. I believe this variety of calculus is not often met with; perhaps not oftener than once in thirty or forty specimens of urinary calculi. Its asperities and general rough surface, will account for the bloody urine occasionally passed by the patient. The chief point of interest in our case, consists in what we claim to be a new and simple method employed in removing the calculus from the urethra.

The sheathed forceps, or bullet extractor, as we will now demonstrate, with a piece of India rubber tubing, I think, may answer a valuable purpose, especially in the adult.

I do not know that so small an affair, and a *thought* or *principle* so simple as that which was made available in accomplishing an important object, is worthy the consideration of the Society; if not, I beg pardon for consuming, even a few moments of its valuable time.